

What Is Claimed Is:

Sub #17

1. An improved ultra-slim disk-spindle motor of the type having: a base plate 200 having a circular hole at a central portion thereof; a housing 210 fixedly inserted into the circular hole of the base plate; a fixed shaft 220 formed integrally with the housing at an upper central portion of the housing 210; a stator 230 bonded to an upper end portion of an inner circumferential face of the circular hole; a lower ball bearing 241 bonded to a lower side of an outer circumferential face of the fixed shaft 220, an upper ball bearing 242 spaced apart by a certain interval from the lower ball bearing 241 and bonded to an upper side of the outer circumferential face of the fixed shaft 220, wherein the improvement comprises:

a cylindrical hub 250 of which both ends are opened, the cylindrical hub having an inner protruding portion 251 formed along a central portion of an inner circumferential face of the hub and an outer protruding portion 252 formed along an upper side of the outer circumferential face of the hub, the inner protruding portion 251 being fixedly inserted between the lower ball bearing 241 and the upper ball bearing 242;

a permanent magnet 260 bonded to a lower side of an outer circumferential face of the outer protruding portion 252 of the hub 250;

a disk 270 mounted on an upper face of the inner protruding portion 252 of the hub 250; and

a clamp 280 fixed with the hub using a bolt 281 and 282 in order to mount the disk 270.

2. An improved ultra-slim disk-spindle motor of the type having: a base plate 300 having a circular hole at a central portion of the base plate; a housing 310 fixedly inserted into the circular hole of the base plate; a cylindrical fixed shaft 320 formed integrally with the housing at an upper central portion of the housing 310 and having a jaw portion at a central portion of an outer circumferential face of the housing; a stator 330 bonded to an upper end portion of an inner circumferential face of the circular hole of the base plate 300; a thrust pad 340 vertically inserted at the fixed shaft 320 and mounted on the jaw portion of the fixed shaft 320, wherein the improvement comprises:

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a cylindrical hub 350 of which both ends are opened, the cylindrical hub 350 having an outer protruding portion 351 protruding from an upper side of an outer circumferential face of the hub and an inner protruding portion 352 protruding along a lower side of an inner circumferential face of the hub, the cylindrical hub spaced apart by a
5 certain interval from the thrust pad 340;

a permanent magnet 360 bonded to a lower side of an outer circumferential face of the outer protruding portion 351 of the hub 350;

a disk 370 mounted on the outer protruding portion 351 of the hub 350; and

a clamp 380 fixed with the hub using a bolt 381 and 382 in order to mount the disk
10 370.

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